permanent expansions; percent permanent expansion; disposition, with reason for any repeated test, rejection or condemnation; and legible identification of test operator. For each cylinder marked pursuant to §173.302a(b)(5) of this subchapter, the test sheet must indicate the method by which any average or maximum wall stress was computed. Records must be kept for all completed, as well as unsuccessful tests. The entry for a second test after a failure to hold test pressure must indicate the date of the earlier test.

(3) *Wall stress.* Calculations of average and maximum wall stress pursuant to §173.302a(b)(3) of this subchapter, if performed.

(4) *Calibration certificates.* The most recent certificate of calibration must be maintained for each calibrated cylinder.

(c) *Repair, rebuilding or reheat treatment records.* (1) Records covering welding or brazing repairs, rebuilding or reheat treating shall be retained for a minimum of fifteen years by the approved facility.

(2) A record of rebuilding, in accordance with §180.211(d), must be completed for each cylinder rebuilt. The record must be clear, legible, and contain the following information:

(i) Name and address of test facility, date of test report, and name of original manufacturer;

(ii) Marks stamped on cylinder to include specification number, service pressure, serial number, symbol of manufacturer, inspector's mark, and other marks, if any;

(iii) Cylinder outside diameter and length in inches;

(iv) Rebuild process (welded, brazed, type seams, *etc.*);

(v) Description of assembly and any attachments replaced (*e.g.*, neckrings, footrings);

(vi) Chemical analysis of material for the cylinder, including seat and Code No., type of analysis (ladle, check), chemical components (Carbon (C), Phosphorous (P), Sulfur (S), Silicon (Si), Manganese (Mn), Nickel (Ni), Chromium (Cr), Molybdenum (Mo), Copper (Cu), Aluminum (Al), Zinc (Zn)), material manufacturer, name of person performing the analysis, results of physical tests of material for cylinder (yield strength (psi), tensile strength (psi), elongation percentage (inches), reduction in area percentage, weld bend, tensile bend, name of inspector);

(vii) Results of proof pressure test on cylinder, including test method, test pressure, total expansion, permanent expansion, elastic expansion, percent permanent expansion (permanent expansion may not exceed ten percent (10%) of total expansion), and volumetric capacity (volumetric capacity of a rebuilt cylinder must be within ± 3% of the calculated capacity);

(viii) Each report must include the following certification statement: ''I certify that this rebuilt cylinder is accurately represented by the data above and conforms to all of the requirements in Subchapter C of Chapter I of Title 49 of the Code of Federal Regulations.''. The certification must be signed by the rebuild technician and principal, officer, or partner of the rebuild facility.

Subpart D—Qualification and Maintenance of IBCs

SOURCE: Amdt. 180–5, 59 FR 38079, July 26, 1994, unless otherwise noted.

§ 180.350 Applicability.

This subpart prescribes requirements, in addition to those contained in parts 107, 171, 172, 173, and 178 of this chapter, applicable to any person responsible for the continuing qualification, maintenance, or periodic retesting of an IBC.

[Amdt. 180–5, 59 FR 38079, July 26, 1994, as amended at 66 FR 45391, Aug. 28, 2001]

§ 180.351 Qualification of IBCs.

(a) *General.* Each IBC used for the transportation of hazardous materials must be an authorized packaging.

(b) *IBC specifications.* To qualify as an authorized packaging, each IBC must conform to this subpart, the applicable requirements specified in part 173 of this subchapter, and the applicable requirements of subparts N and O of part 178 of this subchapter.

[Amdt. 180–5, 59 FR 38079, July 26, 1994, as amended at 66 FR 45391, Aug. 28, 2001]